

CLAIMS:

1. A method for connecting a connecting surface of a first silicon wafer with a connecting surface of a second silicon wafer so as to form an insulated cavity after assembly, at least one of the two silicon wafers including at least one functional area intended to be within the cavity, said method being characterized in that it includes the steps of:

- depositing alloy soldering bumps on the connecting surface of the first silicon wafer, the said bumps being separated from one another by an even distance which is sufficiently small to cause joinings during the assembly of the two silicon wafers, the said deposition of the soldering bumps being carried out during the step of depositing the

5 soldering bumps intended for the electrical contacts,

- reflux soldering in order to connect the two silicon wafers by melting of the alloy soldering bumps.

2. A method as claimed in Claim 1, also including a step of applying a resin to
10 the contour of the cavity.

3. A method as claimed in one of Claims 1 and 2, for which the two silicon wafers include functional etchings.

15 4. A method as claimed in one of Claims 1 to 3, characterized in that it includes a step of filling the cavity with an inert gas.

5. A method as claimed in one of Claims 1 to 4, characterized in that it is implemented within an enclosure filled with an inert atmosphere.

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6. An integrated circuit characterized in that it includes at least one insulated cavity produced according to a method as described in one of Claims 1 to 5.

7. An apparatus intended to receive and transmit communication signals
25 comprising at least one antenna, reception and transmission amplifiers, and a unit for

processing the received and transmitted signals, said apparatus being characterized in that it includes at least one circuit as claimed in Claim 6.

8. An apparatus intended to receive and transmit communication signals as
5 claimed in Claim 7, also including at least one switch for switching between two processing chains for the signals received and the signals transmitted and at least one filter intended to filter the received or transmitted signals, said switch and said filter being placed within the insulated cavity.